



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,983	04/01/2004	William D. Bowers	ENIGMA.002A	7291
20995 7590 12/31/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER HYUN, PAUL SANG HWA	
			ART UNIT 1797	PAPER NUMBER
			NOTIFICATION DATE 12/31/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
eOAPilot@kmob.com

**Office Action Summary**

Application No.

10/815,983

Applicant(s)

BOWERS ET AL.

Examiner

Paul S. Hyun

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-13 and 15-24 is/are pending in the application.
- 4a) Of the above claim(s) 17-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-13,15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### REMARKS

Claims 1, 4-13 and 15-24 are currently pending with claims 17-24 being withdrawn pursuant to the restriction election filed 12/28/06. Applicants amended claims 1, 10, 15 and 16. In summary, claims 1, 4-13, 15 and 16 are pending for examination on the merits.

The amended Specification filed by Applicants has been acknowledged. Consequently, the objection to the Specification cited in the previous Office action has been withdrawn.

The claim objection cited in the previous Office action has been withdrawn in light of the amendments.

The claim rejection under 35 U.S.C. section 112 cited in the previous Office action has been withdrawn in light of the cancellation of claim 3.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "the inlet tube". There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the inlet".

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **1, 4-8 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al. (US 5,441,071).

Doherty et al. disclose a water sampling apparatus (see Fig. 1). The apparatus comprises an inlet 15 that branches into a plurality of inlet ports 18, an outlet 30, a sampling unit 10 positioned between the inlet and the outlet, and a pump 12 for facilitating the sampling of water. The sampling unit 10 comprises a plurality of tubular sampling chambers 16 that are fluidly sealed relative to one another (see Fig. 6). A shaft 54 is configured to intermittently rotate the sampling unit such that at any given time, only one chamber of the sampling unit is in registration with the inlet (see lines 62-65, col. 7). The interface between the individual parts of the apparatus is sealed by o-rings 78 (see lines 59-60, col. 8). The apparatus is capable of sampling water at a rate of 30 mL/min (see lines 24-25, col. 5). The apparatus disclosed by Doherty et al. differs from the claimed invention in that Doherty et al. do not disclose the power consumption of the apparatus. In addition, Doherty et al. do not disclose a battery.

With respect to the battery, Doherty et al. disclose that the apparatus is configured for sampling water at remote locations (see lines 15-20, col. 1). In light of the

disclosure, it would have been obvious to one of ordinary skill in the art to provide the apparatus with a battery so that it can perform its intended function.

With respect to the power consumption, although Doherty et al. do not disclose the power consumption of the apparatus, it would have been obvious to one of ordinary skill in the art to minimize power consumption while operating the apparatus given that the apparatus is configured to operate at remote locations. That said, it would have been obvious to use a low-powered pump and minimize friction between moving parts of the apparatus to minimize power consumption such that the apparatus only consumes 250 mW of power.

Claims **9-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al. in view of Skogley (US 5,355,736).

Doherty et al. do not disclose sorbent cartridges disposed in the sampling chambers.

Skogley discloses a cartridge-like device for sampling water for pollution analysis. The device comprises a shell filled with Amborsorb® for binding ions in water samples (see lines 55-60, col. 3). In light of the disclosure of Skogley and given that the apparatus disclosed by Doherty et al. is configured to sample water for analysis, it would have been obvious to one of ordinary skill in the art to provide shells filled with Amborsorb® in the sampling chambers of the modified Doherty et al. apparatus for binding ions in the water sample.

Claim **12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al. in view of Mereish et al. (US 6,306,350 B1).

Doherty et al. do not disclose a screen.

Mereish et al. disclose a water sampling apparatus comprising a screen 80 that prevents large debris from entering the apparatus (see lines 45-50, col. 5). In light of the disclosure of Mereish et al., it would have been obvious to one of ordinary skill in the art to provide each sampling chamber of the modified Doherty et al. apparatus with a screen to prevent clogging or damage caused by large debris.

Claim **13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al. in view of Weisgerber (US 3,921,178).

Doherty et al. disclose that the sampling unit is configured to intermittently rotate in a timed sequence (see lines 26-35, col. 3). However, the reference does not disclose the use of a Geneva mechanism to control the intermittent movement of the shaft.

Weisgerber discloses a device for measuring time that requires intermittent movement of a shaft. The intermittent rotation is actuated by a Geneva mechanism (see lines 52-65, col. 3). In light of the disclosure of Weisgerber, it would have been obvious to use a Geneva mechanism to actuate the movement of the shaft of the modified Doherty et al. apparatus. A Geneva mechanism would enable the intermittent rotation of the shaft that is required for the intended use of the modified apparatus.

Claim **15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al. in view of Ogawa (US 4,527,968).

Doherty et al. disclose the use of a pump, but the reference does not disclose a pump comprising a pair of rotating members that rotate at different rates in the same direction.

Ogawa discloses a vane-type pump comprising two members that rotate in the same direction but at different speeds during operation (see lines 5-28, col. 4). In light of the disclosure of Ogawa, it would have been obvious to one of ordinary skill in the art to incorporate a vane-type pump like the one disclosed by Ogawa into the modified Doherty et al. apparatus to optimize or alter the sampling rate of the apparatus.

### ***Response to Arguments***

Applicant's arguments with respect to the art rejections have been considered but are moot in view of the new grounds of rejection. The amendments to the claims necessitated new grounds of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

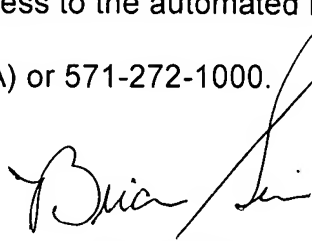
mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul S. Hyun whose telephone number is (571)-272-8559. The examiner can normally be reached on Monday-Friday 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PSH  
12/26/07



BRIAN SINES  
PRIMARY EXAMINER